Ad. No: .....
Name: .....

DARUL HUDA EXAMINATION BOARD

ANNUAL EXAMINATION - FEBRUARY 2024

SECONDARY SECOND YEAR (10)

Time: 2hr(s) **MATHEMATICS** Marks: 70

I. Write the answers for any ten 10*1=10

1. In 10xyz, 10 is the ..... of xyz.
2. An expression which contains two unlike terms is called .....
3. Simplify $(3^2)^3$
4. If the cost of 5 pens is ₹60, what is the cost of 8 pens?
5. Solve $\frac{10}{2}$ divided by $\frac{1}{2}$
6. Find the perimeter of a square with side of length 6 cm.
7. The exterior angle of a triangle is equal in measure to the sum of .....
8. Write $\frac{1}{3}$ as per cent.
9. Which of the following numbers are rational?

   i. $\frac{3}{5}$ ii. 5 iii. 2.5 iv. $\sqrt{9}$
10. Identify the terms in the algebraic expression: $4x^2 - 2xy$
11. The distance around a circular region is known as its ..... and it can be found by the formula .....
12. While subtracting two rational numbers, we add the ..... of the rational number to be subtracted to the other rational number.

II. Answer any six of the following 4*6=24

12. Are the ratios 1: 2 and 2: 3 equivalent?
13. List five rational numbers between $-\frac{4}{5}$ and $-\frac{2}{3}$
14. Examine whether you can construct ΔDEF such that EF=7.2 cm, m<E=110° and m<F=80°. Justify your answer.
15. Diameter of a circular garden is 9.8m. Find its area.
16. Add $3x + 11$ and $7x - 5$

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17. Express in exponential form: $(-4m)^3$

18. The number of illiterate persons in a country decreased from 150 lakhs to 100 lakhs in 10 years. What is the percentage of decrease?

III. Answer any six **6*6=36**

19. The cost of a flower vase is ₹120. If the shopkeeper sells it at a loss of 10%, find the price at which it is sold.

20. Ameer walks $\frac{2}{3}$ km from a place P towards east and then from there $\frac{15}{7}$ km towards west. Where will he be now from P?

21. Construct an isosceles right-angled triangle ABC, where m<ACB=90° and AC= 6 cm.

22. A wire is in the shape of a square of side 10 cm. If the wire is rebent into a rectangle of length 12 cm, find its breadth. Which encloses more area: the square or the rectangle?

23. Two cross roads, each of width 5m, run at right angles through the centre of a rectangular park of length 70 m and breadth 45 m and parallel to its sides. Find the area of the roads. Also find the cost of constructing the roads at the rate of Rs. 105 per m^2.

24. Subtract $24ab - 10b - 18a$ *from* $30ab + 12b + 14a$

25. If Meena gives an interest of 45 for one year at 9% rate p.a., what is the sum she has borrowed?

26. Simplify $\frac{2\times 3^4\times 2^5}{9\times 4^2}$